

Let's Line Up

In this activity you will be using Geometer's Sketchpad to explore points that line up along a path.

Open a new sketch. Under Graph select **Show Grid**. Under Graph also select **Snap Grid**.

Check **Preferences** under the Edit Menu to make sure that points will be labeled automatically.

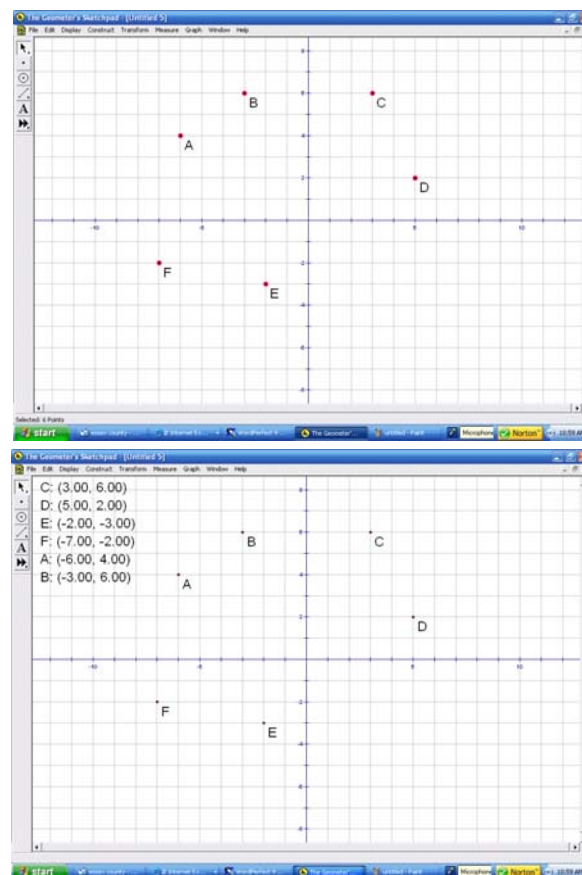
Select the points (0, 0) and (1, 0) and hide them.

Choose the **Point Tool** and then while holding down the shift key click 6 times on the grid at different locations. All the points should be highlighted. While they are highlighted select **Measure**. A list of the coordinates will appear on the screen.

Part I: For each of the following problems, drag the six points to different locations so that they satisfy the described condition. Make a sketch of your drawing on the student recording sheet.

1. The y-coordinate equals the x-coordinate.
2. The y-coordinate is one more than the x-coordinate.
3. The y-coordinate is twice the x-coordinate.
4. The y-coordinate is one-half the x-coordinate.
5. The y-coordinate is one more than twice the x-coordinate.
6. The y-coordinate is the opposite of the x-coordinate.
7. The sum of the x- and y-coordinates is 4.
8. The y coordinate is two more than x coordinate.

Translate each sentence into an equation.



Part II: Open the file Line-Up.gsp. You will see a set of points randomly scattered on the coordinate axis. Press any one of the lettered buttons and watch the points “march” to a new location. Study the coordinates of the points each pattern and then try to write a description like that of part I for each set of coordinates.

